(c) if so, steps taken by Government to tackle the calamity; and

(d) if not, the reasons therefor?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) Yes, madam. The India Meterological Department (IMD) has already been operating a 16 station V-SAT based telemetry system around Delhi for monitoring of local seismic activity. IMD has plans to establish similar telemetry networks in other seismically active zones of the country including, the North-East region.

(b) As per the seismic zoning map published by Bureau of Indian Standards, Muzaffarpur district of Bihar falls in seismic zone IV, which is considered to be seismically active. The adjoining districts of MuzaffarpUr also fall in seismic zones IV & V. However, major parts of Orissa fall in seismic zones II&III. The city of Ahmedabad also falls in seismic zone III. As per the seismic zoning map of the country, zone V is considered to be most severe and zone I the least.

(c) and (d) While there is no scientific technique available anywhere in the world to forecast the occurrence to earthquake with reasonable degree of accuracy in space, time and magnitude, damage caused by earthquakes to human life and property can be substantially reduced with preparedness and adopting suitable design and construction practices for building houses, as per the guidelines published by bureau of Indian Standards.

Herbal contraceptive pills

1218. SHRI K. RAMA MOHANA RAO: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Indian Scientists have developed World's first herbal contraceptive pills;

(b) if so, the details thereof; and

(c) the action taken to patent the drug as well as popularize it?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND

TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) Yes, Sir.The Central Council for Research in Ayurveda and Siddha, an autonomous organization under the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) is developing herbo-mineral female oral contraceptive drug "Pippalyadi Yog". The drug is under clinical trials.

(b) and (c) After the formulation has been found effective in intra mural research of the Council, the project has been taken up by the Department of Family Welfare, Government of India to further access the efficacy of the formulation. The drug is found to be safe during Phase-I, clinical trials conducted at AIIMS, New Delhi, JIPMER, Pondicherry, KEM Hospital, Mumbaiand PGIMER, Chandigarh after due approval from Drugs Controller General of India. Now, the Phase-ll clinical trail will be initiated in the above said institutes. The National Institute of Pharmaceutical Education and Research, Mohali will supply the capsules after ensuring quality and will simultaneously carry out the shelf life studies and estrogen assay. The Government is vigilant to protect the patent right of this drug.

Export of herbs, germplasm and micro-organisms

1219. SHRI K. RAMA MOHANA RAO: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) what steps are being taken to convert bio-diversity resources into value added products for use in domestic requirements and also for exports; and

(b) the total amount of herbs, germplasm and micro-organisms exported by India during the last five years, year-wise?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) Some Central Ministries/Departments/Institutes are supporting research programmes for converting biodiversity resources into value-added products for use in domestic requirements and also for exports. The Department of Biotechnology (DBT) has sponsored various research and development projects for developing different value added products such as herbal drugs, natural dyes, enzymes, biomolecules, biopesticides, biofertilizers